## **EXAMINATION SUBJECT AREAS**

## NATIONAL COMMODITY FUTURES EXAMINATION

## **SERIES 3**

The following is a general listing of the major subject areas covered by the examination and does not represent an exhaustive list of the actual test questions.

## Part 1

# FUTURES TRADING THEORY AND BASIC FUNCTIONS TERMINOLOGY

## A. General Theory

- 1. Development of futures markets
- 2. Futures and securities compared
  - Rights
  - Obligations
  - Transfer of ownership

## B. The Futures Contract

- 1. Futures and forward contracts compared
- 2. Offset provisions
- 3. The clearinghouse function
  - Clearing members
  - Non-clearing members
- 4. Delivery provisions
  - Basis grade
  - Premiums
  - Discounts

## C. The Structure of Futures Markets

- 1. Normal markets
  - Carrying charges
  - "Full carry" markets
- 2. Inverted markets
  - Supply shortages
  - Other factors

## D. Hedging Theory

- 1. Risk reduction
  - Unhedged position
  - Effect on pricing of cash markets
- 2. Short hedging
  - Typical short hedgers: farmers, producers, holders of inventory
  - Effect on pricing of cash markets
- 3. Long hedging
  - Typical long hedgers: processors, manufacturers, exporters
  - Protection against price rise

## E. Speculative Theory

- 1. Leverage
- 2. Risk
- 3. Market liquidity
- 4. Price volatility

## F. General Futures Terminology

Associated Person Floor Broker Basis Floor Trader Bucketing Forward contract Carrying charges Intoducing broker Inverted market Churning Clearinghouse Limit up/down Convergence Lock limit Commodity Pool Long

Operator Normal market

Commodity Trading Pit

Advisor Position Trader
Deferred Retender
Discount Scalper
Expit Short
Futures Commission Spot
Merchant Variation call
First Notice Day Warehouse receipt

## **G.** General Options Terminology

At-the-money Out-of-the-money

CallPremiumConversionPutDeltaSpreadExerciseStraddleExpirationStrangleGrantorSynthetic

In-the-money Options/Futures
Intrinsic Value Time value

Writer

## Series 3 (continued)

## FUTURES MARGINS, OPTION PREMIUMS, PRICE LIMITS, FUTURES SETTLEMENTS, DELIVERY, EXERCISE, AND ASSIGNMENT

## A. Margin Requirements

- 1. The nature of futures margin
  - Performance bond
  - Comparison with securities margin
  - Authority of exchanges to establish and revise requirements
  - Initial and maintenance requirements
  - Documentation: margin agreement, transfer of funds agreement
- 2. Margin calculations
  - Initial
  - Maintenance/variation
  - Effects of substantial price movement
  - Effects of change in requirements on new and existing positions
  - Withdrawal of excess equity
- 3. Alternative calculations
  - Hedge margin
  - Spread margin

## **B.** Option Premiums

- 1. Intrinsic value
- 2. Time value
- 3. The delta
- 4. Premium quotations

Note: where different from underlying contract (e.g., T-Bonds and municipals)

## C. Price Limits

- 1. Effect of limit-up/down price change
- 2. Expanded limits
- 3. Effects on margin of limit moves
- 4. Lock limit
- 5. Circuit breakers

## D. Offsetting Contracts, Settlements, Delivery

- 1. Liquidating long and short positions
- 2. First notice day
- 3. Trading in the spot month
- 4. The clearinghouse role in the delivery
- 5. Delivery notices
- 6. Retenders/stopped notices
- 7. Physical delivery, warehouse receipts
- 8. Cash settled contracts; how settlement is computed
  - •. Stock indices
  - Municipal bonds
  - Eurodollars
- 9. EFP's

## E. Options Exercise, Assignment, Settlement

- 1. Process of assignment
- 2. Margin requirements upon exercise
- 3. Final trading/exercise dates

# TYPES OF ORDERS, CUSTOMER ACCOUNTS, PRICE ANALYSIS

#### A. Basic Characteristics and Uses of

- 1. Market orders
- 2. Stop orders
- 3. Stop-limit orders
- 4. Market-if-touched orders
- 5. Orders on electronic markets

## **B.** Additional Orders

- 1. Good till canceled (GTC)
- 2. Fill-or-kill
- 3. On close
- 4. One cancels the other (OCO)

#### C. Technical Price Analysis

- 1. Charts: bar, point and figure
- 2. Trendlines
- 3. Support/resistance levels
- 4. Congestion areas

- 5. Gans
- 6. Triangles: ascending and descending
- 7. Double tops and bottoms
- 8. Volume and open interest
- 9. Liquidating markets

## D. Fundamental Price Analysis

- 1. Effects of economic or political instability
- 2. Supply and demand elasticity
- 3. U.S. agricultural policies
- 4. Crop years
- 5. Hog/corn ratio

#### E. Interest Rate Analysis

- 1. Yield curves: positive, inverted, flat
- 2. Effects of governmental policies
  - Tax policy
  - Monetary policy

## BASIC HEDGING, BASIS CALCULATIONS,

## **HEDGING FUTURES**

## A. Short Hedging and Long Hedging

- 1. Anticipatory hedges
- 2. Long the basis/short the basis

#### B. The Basis

- 1. How determined
- 2. Effect of basis charge on
  - The short hedger
  - The long hedger
- 3. Effect on price of commodity actually delivered or purchased
  - Transportation costs
  - Variation in deliverable grades

- 4. The basis in financial markets
  - Short-term rates vs. long-term rates
  - "Implied repo rate"

## C. Hedging Calculations

- 1. Net result of hedge
- 2. Net price received upon purchase or sale

Examples:

Grains T-Notes, T-Bonds
Livestock T-Bills, Eurodollars
Foodstuffs Municipals
Metals Currencies
Energy Stock indices

Lumber

## **SPREADING**

## A. Spread Trading

- 1. Order execution
- 2. Expectations
  - Narrowing or widening basis
  - Normal or inverted market strategies

## **B.** Common Types of Spreads

- 1. Carrying charge or limited risk spreads
  - Intra-market
  - Inter-delivery
- 2. Bull and bear spreads
- 3. Intermarket spreads

## SPECULATING IN FUTURES

## A. Profit/loss calculations for speculative trades (including spreads)

- Gross profit on speculative trades: single or multiple contract positions
- 2. Effect of commissions on gross profits
- 3. Return on (margin) equity calculations Examples:

Grains T-Notes, T-Bonds Livestock T-Bills, Eurodollars

Foodstuff Municipals
Metals Currencies
Energy Stock indices

Lumber

## B. Trading Applications

- Recommend appropriate speculative trades given certain economic or technical circumstances
- 2. Use appropriate orders both to initiate and protect position

## Series 3 (continued)

## OPTION HEDGING, SPECULATING, SPREADING

## A. Option Theory

- 1. Long
  - Limited risk
  - Increased leverage
  - Total loss of investment (premium) possible
- 2. Short
  - Increased risk
  - Earn premium
  - Loss may exceed premium received

## B. Option Hedge Strategies/Calculations

- Long put as alternative to short futures hedge
- 2. Long call as alternative to long futures hedge
- 3. Allows for increased profit once breakeven point is reached

## C. Option Speculative Strategies/Calculations

- 1. Long call as substitute for long futures
  - Risk limited to premium
  - Breakeven point
  - Profit and return on equity
- 2. Long put as substitute for short futures
  - Risk limited to premium
  - Breakeven point
  - Profit and return on equity
- 3. Long call to protect short futures (synthetic long put)
- 4. Long put to protect long futures (synthetic long call)
- 5. Long futures-short call (covered call)
- 6. Conversions
- 7. Reverse conversions (reversals)

## D. Option Spread Strategies/Calculations

- 1. Call bull spreads
  - Spread to widen
  - Maximum profit/loss
- 2. Call bear spreads
  - Spread to narrow
  - Maximum profit/loss
- 3. Put bull spreads
  - Spread to narrow
  - Maximum profit/loss
- 4. Put bear spreads
  - Spread to widen
  - Maximum profit/loss
- 5. Calendar spreads
- 6. Arbitrage spreads

## Series 3 (continued)

## Part 2

## **REGULATIONS**

#### A. General

- 1. CFTC registrations/NFA membership
  - Floor Broker (FB)
  - Floor Trader (FT)
  - Associated Person (AP)
  - Commodity Pool Operator (CPO)
  - Commodity Trading Advisor (CTA)
  - Introducing Broker (IB)
  - Futures Commission Merchant (FCM)
  - Exemptions from registration
  - NFA membership
- 2. Futures account opening requirements
  - Know Your Customer (NFA Compliance Rule 2-30)
  - Verbatim risk disclosure statement
  - Commodity customer agreement
  - Discretionary accounts
    - Written authorization
    - Account supervision and review
    - AP minimum experience requirement
- 3. Position reporting requirements
  - Set by CFTC or exchanges
  - Daily reports
  - Applicable to both speculators and hedgers
- 4. Speculative position limits
  - Maximum net long or short position specified by CFTC or exchanges
  - Bona fide hedgers' exemption

## B. FCM/IB Regulations

- 1. Guaranteed and independent IBs
  - Responsibilities of guarantor FCM

- Rules for acceptance of customer funds
- 2. Net capital requirements
- 3. Financial reports
- 4. Collection of margin deposits
- 5. Customer complaints
  - Options-related complaints
  - · Adjustments to accounts
- 6. Time-stamping requirements
- 7. Promotional Material (NFA Compliance Rule 2-29)
- 8. Disclosure by FCMs and IBs required for costs associated with futures transactions

## C. CPO/CTA

- 1. Disclosure documents
  - Upfront fees
  - Performance records
  - Disclosure statements
  - Trading program
  - Five-year business background of principals
  - Conflicts of interest
- 2. Records to be maintained
  - Bunched orders
- 3. Promotional Material (NFA Compliace Rule 2-29)

## D. Arbitration Procedures

## E. NFA Disciplinary Procedures

- 1. Formal complaints
- 2. Warning letters
- 3. Hearings
  - Offers to settle
  - Appeal process
- 4. Member responsibility actions (MRA)
- 5. Penalties for violators
  - Fine
  - Cease and desist order
  - Expulsion

## F. CFTC Commodity Exchange Act Enforcement